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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/367,081	01/24/2000	JEAN-FRANCOIS PENNEAU	15675.P291	3851

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EXAMINER

VO, HAI

ART UNIT PAPER NUMBER

1771

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/367,081

Applicant(s)

PENNEAU ET AL.

Examiner

Hal Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5,7-9,30,34-37,40-44,46,48,49,111-113 and 115 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,7-9,30,34-37,40-44,46,48,49,111-113 and 115 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

WITHDRAWAL OF FINALITY

1. The indicated allowability of claims 39 and 114 is withdrawn in view of the newly discovered reference(s) to Bernstein et al (US 4,396,693). Rejections based on the newly cited reference(s) follow.
2. The art rejections in the 03/01/2004 Office Action have been withdrawn in view of the present amendment.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 5, 7-9, 30, 34-37, 40-44, 46, 48, 49, 111-113 and 115 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 5 and 30 contain improper Markush language.

Claim 1:

line 9, there is a missing term "and" before the phase "vinyl polymers".

line 13, the term "or" is preferably changed to "and" in accordance with proper Markush language.

Claim 5, line 3, there is a missing term "and" before the phase "ethylene-alpha-olefin copolymers".

Claim 30:

line 9, there is a missing term "and" before the phase "vinyl polymers".

line 13, the term "or" is preferably changed to "and" in accordance with proper Markush language.

Claim 36, line 3, there is a missing term "and" before the phrase "ethylene-alpha-olefin copolymers".

Claims 35 and 37, line 3, the term "or" is preferably changed to "and" in accordance with proper Markush language.

The examiner suggests the phrase "chosen from the group" is preferably changed to "selected from the group" in accordance with US Patent practice.

Claim objections

5. Claims 35 and 37 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of claim 30. The limitation "the polymeric materials selected from the group consisting of thermoplastic polymers and elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process" from claim 30 is repeated in both claims 35 and 37. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The same token is applied to claims 112 and 113 for failing to further limit the subject matter of claim 1.
6. Claims 37 and 112 are objected to under 37 CFR 1.75 as being a substantial duplicate of claim 35 and 113 respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to

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the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 5, 7-9, 30, 34, 35, 37, 40-44, 46, 48, 49, 111-113 and 115 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernstein et al (US 4,396,693) in view of Morimoto et al (US 4,862,328). Bernstein teaches a porous electrode comprising over 50% by weight of electrode active material including carbon powder, 0.5 % to 5% PTFE, 0.5 % to 20 by weight of a polyethylene and 15% to 50% by weight polyethylene oxide ((column 3, lines 51-56, column 6, lines 1-10, and column 5, lines 55-56). Bernstein teaches that the porous electrode is a self-supportive film and has a thickness from 1 to 10 mils (column 7, lines 10-12). Bernstein teaches that the porous electrode is formed by extrusion (column 6, lines 41-42). Bernstein teaches the porous electrode comprising polyether with an average molecular weight in the range of 100,000 to 1,000,000 (column 5, line 49). It appears that the electrode of Berstein is made of a composition that is similar to that of the present invention. Further, Bernstein removes the polyethylene oxide from the composition in order to create the pores within the electrode. Therefore, based on Applicant's admission at page 3 of the specification, the polyethylene oxide disclosed in the

Bernstein reference would not be completely eluted from the electrode due to the affinity for the carbon black as well. Bernstein discloses the electrode having the porosity from 70 to 80 volume%, within the claimed range. Bernstein removed the polyethylene oxide from the composition in order to create the pores within the electrode. This is exactly what Applicant does to generate the pores within the electrode. Therefore, it is the examiner's position that the electrode of Bernstein would substantially inherently exhibit the same open porous structure as that of the present invention. Bernstein does not specifically disclose the specific surface of the activated carbon. Therefore, it is necessary and thus obvious for the skilled artisans to look to the prior art for the use of activated carbon with an appropriate surface area for use in electrodes. Morimoto teaches a porous electrode comprising a PTFE, an activated carbon having a specific surface area of 3000 m²/g to increase the electrode capacity (column 3, lines 24-25, example 1). This is important to the expectation of successfully practicing the invention of Bernstein and thus suggesting the modification. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the activated carbon having the surface area as taught by Morimoto motivated by the desire to provide a useful electrode capacity.

Bernstein as modified by Morimoto does not specifically disclose a BET specific surface, pore size and the breaking strength of the microporous sheet. It appears that the self-supportive microporous sheet of Bernstein as modified by Morimoto is made of the same materials with a similar composition (polyolefin, polyethylene

oxide with similar molecular mass, PTFE, and carbon black filler). The amount of each component in the composition is within the claimed range. The microporous film is produced by the same extrusion process as that of the present invention. The carbon black has a surface area within the claimed range. The microporous sheet has the porosity, capacity within the claimed ranges. Since the amount of the individual component, porosity and capacity altogether dictate the average pore size, BET specific surface and breaking strength of the electrode, and the amount of the component, porosity and capacity are within the claimed ranges, it is the examiner's position that the average pore size, BET specific surface, and breaking strength would be inherently present. This is also in line with *In re Spada*, 15 USPQ 2d 1655 (1990).

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1, 5, 7-9, 30, 34-37, 40-44, 46, 48, 49, 111-113 and 115 provisionally rejected under the judicially created doctrine of obviousness-type double patenting

as being unpatentable over claims 1-24 of copending Application No.10/390,422 (US 2003/0175494). Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-24 of copending Application No.10/390,422 disclose every and each element of the presently claimed subject matter with an additional limitation of the electrochemical capacity.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hai Vo

HV


TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700